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OXFORD

AND

MODERN MEDICINE

Oxford

HORACE HART, PRINTER TO THE UNIVERSITY

OXFORD
AND
MODERN MEDICINE

A Letter

To DR. JAMES ANDREW, M.D. Oxon., F.R.C.P. Lond.

SENIOR PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL

HONORARY FELLOW OF WADHAM COLLEGE; FORMERLY CENSOR OF THE ROYAL
COLLEGE OF PHYSICIANS, AND EXAMINER IN MEDICINE IN THE UNIVERSITY OF OXFORD

BY

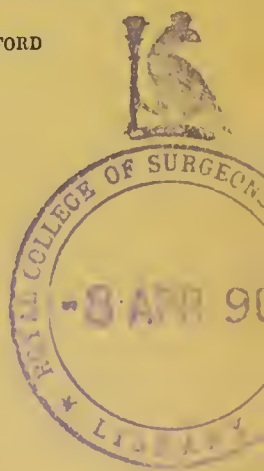
SIR HENRY W. ACLAND, K.C.B., F.R.S.

REGIUS PROFESSOR OF MEDICINE IN THE UNIVERSITY OF OXFORD

Oxford

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1890





P R E F A C E.

THE following letter to my valued friend Dr. Andrew, is one outcome of the observation of a life spent in Oxford, in the endeavour to discharge varied duties, in days of constant change and real progress. Though the letter may be tolerated by friends, it is not suited for publication—for several reasons. It is at once too detailed and too brief; too personal and too general. To illustrate all the points touched upon would take a volume, and then many relevant matters would be omitted. To describe or even enumerate all those who have helped in the development of the Natural Science department, and in the Educational progress connected with them in Oxford in the last forty years, is hopeless. Few now remember the kindly and energetic part taken in their various ways and degrees by Dr. Williams, Warden of New College, Dr. Plumptre, Master of University College, Professor Walker, the Rev. Edward Hill, Dr. Jeune, Master of Pembroke, Dr. Pusey, Dr. Jelf, Dr. Jacobson, Regius Professor of Divinity, Dr. Daubeny, the Rev. R. Gresswell (than whom there was no more zealous and eager supporter), the Rev. Baden Powell, Professor Donkin, Professor J. M. Wilson, Mr. Manuel John-

son, Mr. Church, now Dean of St. Paul's, Mr. Congreve, Mr. Charles Conybeare, Mr. Charles Marriott, the Rev. Dr. Sewell, Warden of New College, Arthur Penrhyn Stanley, W. Thomson, now Archbishop of York, to say nothing of the two Duncans who had created the modern Ashmolean Museum (now devoted to Archaeology), or Mr. Rowell their faithful survivor. The late Mr. Ormerod and the learned veteran Dr. Greenhill, laboured, in 1849, to establish the genuine study of Public Health in Oxford. The importance of their work, never fully acknowledged, should not be forgotten¹.

Of all those who in 1849 helped forward by private subscription and other available means the design of making the study of Nature an integral part of the general education of the University in a complete and efficient manner with all modern appliances, scarce any still live. Five years later, in 1854, a Delegacy was appointed to obtain plans. The progress of the selected structure was opposed at every stage, till the building was completed in 1860. Almost at the last we lost in Convocation, by two votes, the burners to the gas pipes that would light the area, the vote for the pipes having been carried by two. The vote for oiling and varnishing all the fine oak window frames of the front being lost, they baked unoiled through the hot summer of 1859 or 1860.

It might be interesting to record the graver difficulties, but I refrain. I will only mention one which I find is

¹ See report on the Mortality and Public Health of Oxford during the years 1849, 1850. Oxford 1854. Ormerod, on the Sanatory Condition of Oxford, 1849.

generally unknown. All decoration, and notably the statues of the great series of discoverers in the several branches of Science, are all personal gifts. By the advice of the Prince Consort solid corbels were built into the piers to carry a statue on each. We have at present obtained only ¹ fifteen to occupy their proper place in the series. We wait for further gifts. Meanwhile it is to be regretted that marble busts of valued contemporaries not belonging to the series, viz. Professors Phillips, Rolleston, and Henry Smith, are temporarily set down on these corbels, as though we could not afford suitable marble pedestals for our own officers, and were indifferent to the slight we offer to our friends by the incongruous effect of our neglect. It is specially hard on Phillips, to whose wisdom, general character, and great knowledge of museum work, we owe more than to any other person, from the time when he first came to Oxford, while the Museum was building.

I must not be supposed to forget what has been due, in many and different ways, to Mr. Maskelyne, the second Sir Benjamin Brodie, Professor Westwood, Professor Clifton, Professor Pritchard, Professor Odling, Mr. Prestwich, to Rolleston,—of whom I have spoken elsewhere,—to some of Rolleston's pupils, Mr. Edward Chapman, Mr. Moseley, whose illness we deplore, Mr. Jackson, and Mr. Poulton; or now to Professor Burdon Sanderson, whom the University has supplied with considerable means for researches in a department of knowledge for which he has done so much; to Dr. Tylor, Mr. Balfour, and Mr. Arthur Thomson. Some of the younger members

¹ See Appendix, Note viii.

of the University are not aware what it must have cost the Dean and the Chapter of Christ Church to remove their Biological Collection, on which they had spent much thought and large sums of money, to the New Museum. Nothing but the patriotic and resolute temper of Dean Liddell, supported by the Chapter, could have done this. The same noble impulse moved the Radcliffe Trustees, who cheerfully removed their library to the Museum from the noble edifice, which they lent to their loss, to the Bodleian, in the belief that they were helping the Oxford of the future to a deeper study of Nature in the widest and most philosophic way, and so adding ground of gratitude to their Founder. But indeed, as I said, I cannot even enumerate our friends. I daily think of them all, living or departed!

I write this brief preface simply for those who may chance to read this private letter to a friend. We cannot yet see the full results which the deeper study of Nature will produce in Oxford, either in respect of original research, or of the education of youth to be teachers, or to be workers in the several professions whose foundations lie in Natural Science. But I would just remind every reader that on the day the Museum was opened in 1860, one said, amid derision, that some might see the building, then considered extravagant and excessive, to be only the portico of the structures to be hereafter required; that we had prepared the east and the north sides for extension; that there are seventy acres around it; that notably we arranged so as to run on when required, east, north-east, and south of the Observatory, which was placed so as to enable a Botanical

establishment to be laid out between it and the road. Of course all this may seem to have little to do *directly* with the following letter, except to enforce that which is said therein, viz. that as Professor of Medicine I earnestly desire that the broad and yet precise study of Material Science and of Nature may prosper here, as part of the whole range of University thought, and that in the haste for technical education, our Physicians in future may not be relegated as some now desire into a professional class or clique by themselves, but be as formerly a living part of the whole of the Scientific and Literary University. And this I desire in the interest of Medicine. For this there are reasons, deep as Human Nature; deep as the search after God; deep as the yearning of souls to believe in Christ. No one now doubts that we are in one of the great cyclones of human thought; no one, I think, can say that amid all the amazing progress of knowledge, matter and evolution have yet given the key to the Soul, or to its yearning after God.

Shall we not strive to keep our biologists in sympathy with earnest historical, theological enquirers, and these with the truth-seeking physicists and students of organic nature? While reverence and caution, qualities of the greatest men, hold their sway, neither Science nor Religion have reason to fear.

From the Author.

A copy of this paper can be obtained by anyone personally acquainted with the writer, on application by letter to Mr. James Ford, University Museum, Oxford.

NOTES IN APPENDIX.

The following Notes have been appended to the letter in order to explain to any non-medical reader some allusions which would if expanded in the text have diverted attention from the main subject. These might have been indefinitely multiplied. I fear indeed that my valued colleagues in Oxford, and other scientific and medical friends who may see this privately printed paper may blame me for putting in type at all so slight a sketch of what the old Oxford has been attempting to do for the addition of modern science, General and Medical, to the old forces of the University.

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LETTER.

OXFORD,
October 18, 1889.

MY DEAR DR. ANDREW,

Several circumstances induce me to address the following communication to you, and, through you, perhaps to some of the Oxford Graduates in Medicine.

I have resided in Oxford, with various absences on duty and from reasons of health, for fifty-four years. Forty-four years ago, in the year 1845, before I graduated in Medicine I became Lee's Reader in Anatomy, in Christ Church.

In the half century thus passed in the University I have seen more changes, Theological, Scientific, Social and Educational, than, if looked at collectively, have occurred in any other half century, the period of the Reformation alone excepted.

Nor are these changes complete. It is because we are still in a state of evolution, as they now say, that I address you, as a trusted expert in a great Metropolitan Hospital, on the subject of the relations and national duties of our University towards Medicine, as now understood, Public, Personal, Preventive and Curative. It was said by Ruskin, if I remember rightly, that there are times in the life of individuals and of institutions, when they should ask 'Whence do we come?' 'where are we now?' 'whither are we going?'

To these three questions I address myself as regards the interests of our common profession in our common University. This must be attempted with brevity. You know

much that will be set down, yet not being resident, you may not be aware of all the particulars in their proper order and bearing. This order must be appreciated if we are to know where we are, and whither going.

Now here it must be said, in passing, that the object of my letter is to ask you to consider the grave question, What should our University attempt now to do for Medicine as with all which that word implies in our day?

Popular writers on Education sometimes speak of Universities as if they were all alike in functions and in capabilities; as though the Universities of London, Oxford, Cambridge, Victoria University, Edinburgh, Berlin, Paris, Bonn, are or can be made the same in character without a Napoleon or Bismarck as Minister of Education; and, secondly, men talk of Medicine and 'Medical Schools' as though either of them are what they were, or could be exactly of the same type as at the beginning of this century, or can be in free England as they are in State-regulated Germany. The term also, Medical School, is misleading. In this country it means a completely furnished institution for every department of a complicated subject divided of necessity into many parts. If the School is to be of real repute it must be situated where material of all kinds and teachers in every branch can be had, abundantly and of the best, viz. in the great cities. We should speak here of our Faculty of Medicine, not of a Medical School which we have never had.

Much writing and speaking of this kind is based on a misconception of the individual characters or of the differences of the several institutions in question. Men often display great want of knowledge of what is the ground-work of the Science and of the Art of Medicine.

As far as some members of the Oxford Convocation are concerned, this arises mainly from two causes; firstly, that the Residents were until within the last forty years, almost wholly given to other than Scientific¹ interests; and secondly, that persons often obtain their ideas of the Medical Profession from their family medical attendants, who may or may not be well informed as to the rapid progress of Scientific knowledge bearing on organic beings in health and in disease, and may or may not be acquainted with the extent and character of University studies and teaching in this and other countries, and have not themselves had a University Education. Persons of influence here have often been misled in this way.

What follows will be strictly limited to a period within my own observation, viz., the last fifty years. It would occupy you far too long were I to attempt to write a detailed history of the rise of the Scientific, Biological, and Medical Departments in Oxford. It would not promote my present practical purpose, which is to answer the question, what should Oxford do now in respect of Medicine, I will not say for Great Britain, but for promoting on true lines of thought the Science and Art of Medicine. It were treacherous to Oxford and unworthy of Science to consider the matter on any narrower basis, watched as we are especially by our brethren in the United States, in the course we are taking.

The condition of the University in respect of Medicine before the recent revival was stated clearly by Dr. Kidd in his evidence given to the Committee of the House of Commons in 1848, and by Dr. Kidd and by Dr. Ogle to the

¹ The terms Scientific and Science are for simplicity used throughout in relation to 'Natural Science.'

University Commission of 1852. Dr. Kidd sums up his opinion practically, in 1852, in these sentences :—

‘It has been a universal custom, for the last sixty years at least, for the Medical students of Oxford to resort to the London or other schools for the purpose of attending lectures on the Theory and Practice of Medicine as soon as they had taken their degree of Bachelor of Arts at Oxford.’

‘With reference to the question, whether the University of Oxford might be made a more effective school of Medicine, I am strongly of opinion it could not; principally, because, from the comparatively small amount of the population of the City of Oxford, it never could afford a sufficiently ample field of observation for the successful study of Medicine; but also because, from the limited and interrupted periods of the academical terms, there would not be sufficient time to give such expanded courses of lectures on Medical subjects as are requisite for professional students.’

It was no doubt partly for this, but also for a still more important reason, which will presently appear, that Sir Benjamin Brodie, being consulted by my father as to ‘how this boy should be made a physician’ (I was then at school), said in my hearing, ‘Send him to Oxford; let him pay no attention there to what is to be his future profession. Let him have a thorough University education as though you meant him to go into Parliament.’ This was about the year 1832. It is recorded now in order to remove the question from recent controversies. That was the opinion of the best preparation for a scientific and professional life, given by a consummate judge of the matter. For Sir Benjamin, consummate Surgeon and President of the Royal Society, had always taken a deep and philosophic interest in the subject of Medical education, whether for ordinary youths or for the higher or honours men.

Since I have watched the subject, I have learnt that there was a double edge in Brodie's remark: first, that all the details of practical Medicine should not, and secondly, that they could not, be studied with advantage in Oxford: and it is remarkable that this view of Oxford has been frequently pressed upon me during the forty-five years in which I have had some voice in the matter, not only by Brodie in England, but by Stokes in Ireland and by Alison in Scotland. They who have known, and have read aright the lives and the character of these three representative men in England, Scotland, and Ireland, know that wiser, nobler, higher natures have never advanced the scientific and practical work of Medicine in this or any other country.

Thus directed I passed through my undergraduate life, broken by bad health, spending, under medical advice, nearly two years in the Mediterranean on board a man-of-war; visiting and studying Athens and Rome guided by Chevalier de Bunsen's genius, Carthage, Constantinople, and Troy, seeing much of men and things before I took my B.A. degree.

After five years in London and Edinburgh, Brodie advised, in 1845, that I should, on account of my health, relinquish the thought of living in London, and accept the Lee's Readership in Anatomy at Oxford, offered to me by the Trustees, though still a medical student, and at the time seriously ill from a dangerous inflammatory attack.

An apology must be made even to you for this personal recital. It was however necessary in order to explain much that follows. Further details, unimportant here, will be found in an Appendix to this letter.

I find myself, then, appointed Teacher of Anatomy in

a College. The Regius Professor of Medicine, Dr. Kidd, an admirable man gifted with a real scientific insight, and a person of the highest integrity, was still nominally the University Professor of Anatomy. He resigned the Readership at Christ Church because it was the only office which called for active duty. He informed me when he left, that he had as pupils one from the University, an occasional Medical apprentice from the town, and one or two members of the College. It happened that the *Travels of Carus*, the famous Physician of the king of Saxony, fell into my hands, when on my way back to work at Edinburgh, and shortly after I was installed.

In this volume I read concerning Oxford—

‘We also visited the *theatrum anatomicum*, the whole arrangements of which brought back the times of Vesal to my mind. Above the Professor’s table hung a human skeleton, and a figure showing the muscular conformation of the human subject, so that they could be let down and drawn up again by cords: the latter was that sort of preparation which Albin was celebrated for, and is such as to cause a feeling of disgust in an uninitiated spectator. All round the Theatre, behind the amphitheatrical seats of the audience, were skulls and anatomical preparations, everything quite in the antique style. Prof. Kidd, a good-natured old gentleman, quite corresponded with these ancient treasures. He may, probably, formerly have had some talents, or at least some liking for personal activity and inquiry; or, at a later period, without any excitement from without, in a University devoted almost entirely to philology and theology (which is indeed no *universitas*), and without sufficient inward power and excitement, the stagnation of all philosophical study, of natural history, soon put a stop to his activity.’

There was enough of truth in this statement to appal me¹. It seemed as if the young pupil of Owen, Brodie, Alison,

¹ See Appendix, Note ix.

Allen Thomson, and Goodsir, had unwittingly embarked on a desperate undertaking. I consulted Alison and Goodsir whether to immediately resign the place, or to attempt the task of establishing Biological study in Oxford on such a basis that it must be lasting, and would be to some extent worthy of a National University.

It seemed to me beyond my power of body or of mind. Yet to make the attempt was more worthy than to surrender at once.

The course I therefore decided upon was to begin to form an Anatomical and Physiological series on the plan of the Hunterian Museum, which was then under the care and exposition of Richard Owen. Goodsir was doing this on a great scale in Edinburgh. The influence of Owen's lectures on Comparative Anatomy during my life at St. George's had been one of fascination, for as you are aware the aim of John Hunter was to study and illustrate the entire processes and causation of all disease, by the complete study of every attainable organism, animal or vegetable, extinct or recent, in every stage of development, and in every condition, normal or abnormal. My work was at once begun by dissections in Edinburgh, by dredging in Orkney and Shetland, by drawings and by diagrams made by Mr. Wintour, a young artist of high ability, since famous as a landscape painter. All are now gone who helped me then in an affair they looked on with deepest interest.

But I here cut the story short to describe briefly the condition of Oxford about this time. I obtained my Medical degree, having been examined in 1846 partly by members of my own class, in my own class-room.*

On the history of Oxford fifty years ago much has been

* See Note by Dr. Greenhill inserted at end

written of late. Cardinal Newman's 'Apologia,' his Lectures on University subjects, Mr. Mozley's 'Reminiscences,' Dean Burgon's 'Twelve Lives,' the 'Life of William George Ward,' have made the religious and literary world familiar with it. I therefore confine myself to reminding you of the state of the University as it bore immediately on the department of Natural Science, which my teachers had shown me to be the foundation of the higher Medicine.

As you know, the Royal Society was at least half founded in your College of Wadham about 1650, before it was removed to London. Linacre had been Fellow of All Souls in the fifteenth and Sydenham in the seventeenth century. Harvey had become Warden of Merton for a short period during the stormy time of 1645. Radcliffe had left money in the following century to build a Library near the Bodleian (not, as is often said, for the purpose of Medicine especially). From funds bequeathed by him, his Trustees built a Hospital to his memory, and with a wide scientific appreciation erected an Observatory, with provision for its endowment and maintenance. Willis and others had adorned the University, studying Medicine however on the continent. Dr. Lee left estates to Christ Church, out of which a small stipend was to be paid to a Reader in Anatomy. Dr. George Aldrich had given about £130 a year each for a Professor of Chemistry, of Anatomy and Medicine; and other endowments, modest enough, were made for Geology, Mineralogy, Astronomy, Mathematics, Geometry. All these endowments and others existed—and I must not weary you by repeating the oft-told tale of the manner and extent to which the University Professorships had given place to the influence and teaching of the separate Colleges. I have to show you

how the then conditions bore upon the Sciences allied to Medicine, and on Medicine itself, and why the College Readership in Anatomy, with its little Anatomy School behind Christ Church Hall, came to be of importance.

The University had not a single laboratory for students in any subject. The Regius Professor of Medicine had neither books, drawings, apparatus, nor apartment, and was not necessarily attached to the Hospital. A residence, of which a long lease had been left for his use, his only visible dignity, had ceased to be his. Great efforts had been made by Dr. Kidd and the two brothers Duncan to light the torch of Science. Daubeny had won golden opinions by his industry, singleheartedness, and devotion both to Chemistry and Botany. He practically made the Botanical Gardens. Buckland had carried by storm some of the most intelligent residents, and commanded a large audience by his graphic eloquence and his enthusiastic devotion to the new study of the formation and growth of our planet. He had disturbed the slumbers of many who could not open their eyes to the true genesis of the earth. Sir Charles Lyell had led attacks on the University for its neglect of natural knowledge, for whose advancement so much had been done by the able men I have named. But waves of indifference had swept over the University at the end of the last century and the beginning of this. The revival, which began partly no doubt with Wesley, but in right earnest in about 1830, was wholly theological. It was theological, however, in a limited way. It was not, as I read the story or watched its developments, an open fight for those deepest questions which agitated men in the time of Bishop Butler, or stir men now throughout the world of human thought. It took in large measure

the form of a struggle between thinkers and Christian historians on questions vital, without doubt, to the forms and history of Christianity, but which left comparatively on one side the primary questions which belong to the unfolding knowledge of the nature and origin of organic beings and the unity of the material universe. For many reasons I dare not, and cannot, pursue this matter further, deeply as it interests a student who had, as I had, been thrown among Soldiers, Sailors, Greeks, Jews, Mussulmen, Bedouins, in Asia Minor, Greece, Italy—before railways or Cook's personal tours, or Murray's Handbooks; and now was attached, by reason of gratitude, and I might add reverence, to Pusey, Maurice, Stanley, Marriott, and—though I knew them personally less—to Newman and Keble. And so I come to the practical bearing of a long story, briefly told, upon Medicine.

In 1847 the British Association came to Oxford. I was a local secretary, and was brought into friendly relation with many men of scientific eminence—Owen, Joseph Henry Green, Milne Edwards, Faraday, Van der Hoeven, and many others. Professor Melville, of Galway, was then my Anatomical Assistant, and of his ability, industry, and scientific power enough could not be said. The formation of the Hunterian series in Christ Church, of which I spoke just now, had in the last two years made progress. Practical classes in Histology and Embryology had had a great success. They hardly existed at this time in the Medical Schools. I personally imported microscopes from Paris, and sold them at a loss to the students. Schwann and Schleiden, Goodsir, Martin Barry became familiar names to college tutors. Dean Church, Charles Marriott, J. M. Wilson (afterwards Professor of Moral Philosophy and President of C. C. C.),

were regular workers during long winter evenings in the cellar of Christ Church Museum at these practical classes, forty years ago. The present Dean Liddell, my College tutor, guided, urged, and sustained my endeavours.

Encouraged by all this, the following letter was sent by me to Buckland, our veteran Science Chief, friend of Sir Robert Peel, then living chiefly in London as Dean of Westminster, and coming down occasionally to lecture here. But his class, like Kidd's and Daubeny's, was practically gone. The attention of many of the more thoughtful undergraduates was largely given to controversies on Church History and Ecclesiastical Polity.

OXFORD,

July 12, 1847.

We, the undersigned, being officially connected with various institutions for the Advancement of Natural Knowledge in this University, are of opinion that the several Collections contained in the Geological Museum in the Clarendon, the Ashmolean Museum, the Anatomical Museum in Christ Church, are deposited in rooms of inadequate dimensions and inconvenient arrangement, and that their present efficiency and future progress are by these means retarded.

Believing that the future welfare of the University is intimately connected with the progress of all her institutions, we are desirous of furthering such steps as may tend to the erection of an edifice within the precincts of the University for the better display of materials illustrative of the facts and laws of the Natural World.

And in connection with such an edifice we should recommend that there should be one or more Lecture Rooms arranged in a manner suited to Demonstrative Lectures, and an apartment calculated to serve the purpose of a Library and place for Scientific Meetings as occasion may require.

We earnestly commend this to the consideration of those who are interested in the future welfare of Oxford, and we shall be

grateful for their opinions and advice as to future proceedings on this subject.

(Signed)

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Professor of Geology.

CHARLES DAUBENY, *Professor of Chemistry and Botany.*

P. B. DUNCAN, *Keeper of the Ashmole Museum.*

ROB. WALKER, *Reader in Experimental Philosophy.*

HENRY WENTWORTH ACLAND, *Lee's Reader in Anatomy.*

The following was the reply from the Dean—

MY DEAR ACLAND,

I most sincerely congratulate you on the joyous event communicated in the postscript of your note of Xmas day¹.

Some years ago I was sanguine, as you are now, as to the possibility of Natural History making some progress in Oxford, but I have long come to the conclusion that it is utterly hopeless. The idle part of the young men will do nothing and the studious portion will throw their attention into the channel of honours and profits which can alone be gained by the staple subjects of Examination for Degrees and Fellowships.

At present it is a detriment to a candidate for either to have given any portion of his time and attention to objects so alien from what is thought to be the proper business of the University as Natural History in any of its branches.

I therefore return the paper which, I think, it would be useless mockery to put my name to, and am,

Very sincerely yours,

(Signed)

W. BUCKLAND.

What was to be done?

Work and wait. Dr. Melville left me that year. First the present Professor Beale, and next Victor Carus, now the eminent Professor of Leipzig, fellow-student and friend of Max Müller then just come to Oxford, joined me. The

¹ Birth of my eldest child, now Captain W. Acland, R.N.

Keeper of the Royal Academy sent down an excellent artist, Mr. Julian Drummond, to complete the drawings and the diagrams necessary for scientific papers and lectures, which I had begun in Edinburgh. They amount now to nearly 1000, preserved in the Radcliffe Library, to which he became attached for many years as 'Radcliffe Artist.'

Victor Carus and Charles Robertson went for some months to the Scilly Islands to dredge and dissect. I then thought 'Rennel's branch of the Gulf Stream' might have established sub-tropical forms on our coast, and that they might be found by these zealous workers. This expedition, in 1849, founded Carus' work on Morphology, published in 1852. Dredging was then a comparatively new thing, inspired by the rare genius of Edward Forbes, but it was intended by me both for purpose of zoological research and to get material for the Anatomical series. I was obliged to practise in my Profession by day to enable me to carry on the work, of which my share was done chiefly at night, being also now Physician to the Radcliffe Infirmary.

But a circumstance occurred in 1848 which, for good or for evil, settled the course that should be pursued in relation to Medicine in Oxford for many years to come, and brings this recital, at once tedious to you and most incomplete, to a close.

A Bill was to be brought into Parliament in 1848 for Medical reform. My attention was drawn to the subject by Sir Benjamin Brodie, who was actively interested in the matter, with special reference to Oxford, as a licensing and graduating body.

With Sir Benjamin I looked very carefully into the questions, and came to two conclusions.

First, to advise the University to relinquish its power

of licensing, on condition of being linked to the Royal College of Physicians for examination purposes.

Secondly, to urge the University to carry out the plan deemed hopeless by Buckland, viz. to establish here complete *practical* teaching in every department of Natural Science, first for the general education of all classes, and then for medical students working for every grade of the profession, as the most thorough preparation for the study of practical Medicine in the best hospitals and under the ablest teachers in the country.

The two principles stated above were thus settled in my mind forty-one years ago. The first was for many years the subject of much discussion in the Medical Council, instituted ten years later, but was not in principle abandoned till the amended Medical Act of 1886.

The second has been much debated here, and at present is still contested. The object of this letter is to help in forcing a settlement on one side or the other.

I. Shall Oxford be, as regards Medicine, a place of the most perfect preparation that can be devised for the best clinical study in the completest manner elsewhere? or

II. Shall Oxford be now made a complete Medical School¹?

Several reasons make this an opportune moment for revising the whole situation actually commenced in 1854.

The Museum, as proposed to Buckland, was intended to bring together into one Institute, the several departments of Physical Science. However important and necessary subdivision and specialising may be, and are, there is, for a scientific Education, one thing as important, viz. to give to the learner, an abiding sense of the Unity of Nature. All recent progress seems to say that neither by dimension

¹ See Appendix. Note i.

nor distance are the properties of matter destroyed. The Astronomer and the Microscopist in this respect have common ground. We therefore desired to show forth the natural world in its widest expression to the student of science and to the thinker in other departments of knowledge. I must not be drawn here into an account of how, as things were, this was to be brought about. But I cannot forbear to record that Dr. Pusey perceived, as early as 1845, the advantage of reviving in Oxford what, in 1878, he truly called 'The Study of the Book of God's Works.' He used his great influence to secure the erection of the Museum. But in two important particulars we failed and have failed grievously. It was intended to remove a portion of the Botanical Gardens, and to rebuild some of the necessary buildings and to construct laboratories in the neighbourhood of the Museum. To sever the extinct from the existing Flora, was as hateful to us as to sever the living from the extinct animals, or the Palaeontological from the recent Anatomical and Physiological series¹. We promoted the purchase of eighty acres of land near the Museum that the new Institute might be able to expand, and in the faith that it would do so, Radcliffe's great Scientific Library was moved by the far-seeing Radcliffe Trustees into the Museum and its funds largely increased.

The Scheme for the methodic display and study of the Kosmos has been grievously mutilated according to our view. We have been fortunate, thanks to Professor Pritchard's great exertions, in obtaining a working Observatory on the grounds, and more lately by General Pitt Rivers' munificent efforts to extend the philosophical appreciation of Anthropology, to which Dr. Kidd

¹ See Appendix, Note ii.

and Milne Edwards had somewhat contributed in their degree near half a century ago, by giving many crania and racial casts from India and the Pacific.

We have also hitherto failed in obtaining an institute and laboratory of Comparative Pathology¹. I had hoped to see on grounds near the Cherwell, a little model establishment, wherein the centre of our Agricultural district, and connected with our college properties, the abnormal conditions of domestic or other animals might be studied for themselves and in relation to man. It is not too much to say that this would have soon become an object of deep interest to the whole University, and their visitors and guests. The fates were against us—we have failed. Twenty years ago, and more than once since, we cherished hope, destined to be cast down. Van der Kolk's pathological collection was brought here from Holland in 1865. A laboratory for Pathological and Hygienic work was actually maintained for several years, without expense to the University in the Medical Department, and was training a young physician of rare character and powers, the much to be lamented Dr. Pöde². In it Professor Lankester did some of his first work for the Royal Society. The younger William Donkin, whose premature death in the Caucasus startled Europe, used it long as Public Analyst, succeeding Dr. Pöde. Mr. Lawes and Mr. Dowdeswell also found their place there for two years, the former being employed by the Government, under Dr. Burdon Sanderson, when he first came to Oxford. Mr. Lawes was removed by the Government. Why his work was discontinued I did not learn. Many years before I had talked over with Sir John Lambert, at the Royal Sanitary Commission, the possibility of doing work here for the

¹ See Appendix, Notes iv. v. vi.

² See Appendix, Note iii.

Government for the advance of Comparative Pathology¹. I hope shortly to have modern Bacteriological work established in the Laboratory, under the best advice and help².

Still, all this notwithstanding, there is good ground for still wishing that our Medical students should all pass through the general training of the Physical Science School, before they are confined to their own directly professional studies, and become a class separated from the rest of the University.

It must surely have escaped the observation of resident Members of Convocation in general that the course of things has lately tended to drive Oxford men preparing for the great profession of Medicine out of the ranks of Literary, Historical, or Philosophical culture. But it is so. For instance, last year a Memorandum was circulated advising a course of study for Oxford undergraduates preparing for the Medical Profession. Their first year in Oxford was to be given to Chemistry and Physics, the second to Biology, and so on; in other words, it was implied that, having once entered the University after leaving school, they should make an end of all studies but those which were to bear directly on the Examinations in Medicine.

Goldwin Smith wrote several years ago:—

‘We must be on our guard, of course, against the tendency to bring studies here when they might be better pursued elsewhere, merely for the sake of increasing the greatness of Oxford; the University is made for education, not education for the University. But, both in the case of Law and Medicine, there seem to be genuine and important reasons for domesticating the professional study in a place of general culture, under humanizing and liberaliz-

¹ I am greatly indebted both to Dr. Armand Ruffer, and to Professor Crookshank for their kindness and trouble in this matter.

² See Appendix, Note v, ‘Letter to the Right Hon. the Lord Mayor,’ p. 56.

ing influences, and with the checks and corrections which the juxtaposition of different sciences affords, as well as for connecting it closely with a preliminary course of liberal training. The lawyers generally testify that law ought to be studied more scientifically. Medical men, in the same way, are anxious that their profession should again be connected with liberal studies, and with the place where those studies are pursued. The College of Surgeons has lately been making notable efforts in this direction. Nor does there appear to be any doubt that *the strictly scientific parts of medical training may be gone through at Oxford in the best way*; indeed, I believe it is not too much to say that already a student may get as good a scientific education here as at any place in England.'

The same opinion has been expressed by the two Royal Commissions of 1852 and 1879.

Now is '*the best way*' to discard, for instance, with Responsions (which may be passed before coming up), further literary work say, all History of Science, to put aside acquaintance with such a class of works as Herschel's Natural Philosophy, Whewell's History and Philosophy (brought up to date), modern works equivalent to Mrs. Somerville's Connexion of the Physical Sciences, Jevons' Principles of Science, some perhaps of Lotze's or Darwin's writings—now also Weisman's—some of the many treatises on cerebral anatomy and physiology; Climatic geography, and distribution of animals and races, all subjects proper for the Honour Natural Science School—and most of them implying practical work in the Laboratories. The list is only by way of suggestion. Any man of wide philosophical culture would extend or modify it. Professor Burdon Sanderson's late address to the British Association ends with a hint in two directions on this matter, and one not unworthy of notice from so trained an expert as he. But I put the question to you. It is a very grave one. Shall it be henceforth understood

that Oxford Medical Graduates have been, while at Oxford, made into a class by themselves, to be trained only for Medical Examinations? and some of the students in Medicine not even to be prepared for the University degrees?

Many of the students intended for the Medical Profession find themselves discouraged from pursuing not only the old *Literæ Humaniores* as an adjunct to 'Arts,' but even the Honours in the Natural Science Schools, excepting as an immediate step to the Medical degree.

I hold it as certain—certain as far as such conclusions can be—that the Oxford Science department will in the end break down, to the great loss of the University, if it be now driven exclusively into a training ground for Professional Examinations. It would probably be better, for the students of Medicine at all events, to go at once to the great London Schools, which are now beginning to give scientific as well as practical education on the best model, with the largest experience and opportunity, under teachers selected from the widest area. There is also a growing desire to arrange the studies here with a view, not to Medical graduates in Oxford, but to men who only intend to pass the London Conjoint Board, and not to graduate in Medicine here.

The pendulum is just now swinging hard between 'Educate technically' and 'Specialise early,'—good advice for the lower, bad for the higher, type of character. The Examination system was humorously described to me lately, by a young Surgeon as 'Get least knowledge in shortest time.'

The case of really able youths, the guiders of thought, is not here to be considered. Our examination system probably mars more than it makes of these.

The present difficulty has much increased since the time of Dr. Rolleston's death. It is needless to write to you on the

character of that remarkable man. He was filled with Biological conceptions, and engaged in Biological work of the widest kind. To him Man was the crown of the whole. But Man in his material origin and descent; Man in his evolution, social, moral, and intellectual; Man of every time, character, aspiration, man in his highest relations to his fellowmen, and to his God. Nothing was amiss to him but meanness and indifference. Poetry, philosophy, history, shown in endless quotations from Aristotle to George Eliot, from Homer to Tennyson, from Herodotus to Macaulay. He equally revelled over the dry bones of mummies, the dust of mounds, or the fragments of pottery. He delighted in any sanitary details, in hospital construction and administration. He had been with our sick and wounded in the Crimean War, and there had acquired the deepest sympathy with sickness and suffering on the largest scale and the least particulars. He had been an Hospital Physician. He was a fierce denouncer of slavery, a passionate supporter of the North in the contest of the United States. His zeal for the Temperance cause in public and in private knew no bounds. He dredged for Invertebrates in Torbay in his later years, as he was working on the Hunterian series which he had inherited, with the enthusiasm of a boy. With boundless sympathy for all that was noble in intellect and in morals, among all sorts and conditions of men, he was, when cut off from among us, beginning to inspire the like temper of enthusiasm for science and morality and benevolence in the men that were about him. Unconsciously, they for the most part drew in the reverent and devout spirit that dominated his eager nature. His work and his interests overwhelmed him. His end was saddened by attacks on

his methods and his aims. He was held up to ridicule in the public prints by more than one of those who were incapable of appreciating his greatness and his large views of Biological Science, or of allowing for his sometimes eccentricity in language. He counted among his demonstrators and pupils, for whom he devotedly did his best in the promotion of their true interests after they left him, such as, among others making their mark, Mr. Bruce Clarke, Dr. Champneys, Dr. Church, Professor Corfield, Mr. Boyd Dawkins, F.R.S., Mr. Gulliver, Mr. Jacobson, Mr. Hatchett Jackson, Professor Ray Lankester, F.R.S., Professor Moseley, F.R.S., Dr. Moullin, Dr. Payne, Mr. Poulton, F.R.S., Dr. Sharkey, Professor Thomas (of Auckland), Mr. Teale, F.R.S., Mr. Tömes, F.R.S.

Even before his death began a cry from without for 'Specialising.' Oxford was asked to believe that general literary education, and broad philosophical Biology, such as John Hunter revealed to England, was not the duty of the University towards Medicine; that she must turn her new Physical Science Institute mainly into a purely Professional School, and so deprive our future students of Medicine of an enlightened University training. One witness at the Royal Commission advised appointments as follows.

'Will you tell us how you would propose to organise your Medical School?'

'It seems that about £20,000 a year would be required to maintain the staff which I have enumerated in a list in the paper before me, a part of which would belong to the faculty of physical science and mathematics, whilst £50,000 would have to be sunk in buildings additional to those already existing for the use of this staff. As a rule I have assumed that £1000 would be the stipend paid to a professor.'

'The list would be : (1) a professor of medicine; (2) a professor

of surgery; (3) a sub-professor of gynæcology or midwifery with a less income; (4) a sub-professor of psychiatry, that is, lunacy; (5) a sub-professor of eye disease; (6) and (7) two additional clinical lecturers who would only require small salaries; (8) a professor of hygiene and forensic medicine; (9) a professor of pharmacology and the action of drugs with a laboratory and assistance. The laboratory and assistance might be estimated as entailing an expense of £500 a year, quite one-half of what the professor's salary would be; (10) a professor of human anatomy with dissecting room, laboratories, and assistance, which again would involve an expense of £500 a year besides the professor's salary; (11) a professor of physiology with laboratory and assistance, which would in all probability be much more costly; (12) I would propose a professor of histology and embryology with a laboratory and assistance; (13) a professor of pathological anatomy, with a laboratory and assistance. The following would belong to the physical science faculty, but have seats also in the medical faculty. I have not enumerated in this list the professors of mathematics, mathematical physics, astronomy, geology, and mineralogy. They would not, of course, come into the medical faculty; (14) a professor of experimental physics with a laboratory and assistance; (15) a professor of comparative anatomy, with a museum, laboratory, and assistance; (16) a professor of botany, with a garden, laboratory, and assistance; (17) a professor of chemistry, with a laboratory and assistance; (18) a professor of physiological chemistry, with a laboratory and assistance; (19) an additional assistant professor of chemistry; (20) a professor of general biology, namely, the distribution, origin, and forms of species,' &c.

Professor Lankester had thus the courage of his opinions, and stated frankly what he required for a Medical School in Oxford. Not being a Medical man, however, he understated greatly the clinical requirements. And to the Professor's twenty several more ought to be added to make the thing complete. Do those who speak freely in Oxford about

‘the Medical School’ mean this? I have failed to learn. They only say ‘We want a Medical School.’

Professor Lankester’s advice was not followed. But alas! neither was the earnest but modest advice that the study of Biology, specially including General and Comparative Pathology, should be firmly established in the University on the widest scale; and that all vegetable and animal organisms extinct and existing, healthy and diseased, should be typically represented in our Museum.

As was always intended to be done, when the opportunity offered, Rolleston’s chair, which had been a great step in advance, was divided at his death into two parts. But the portion devoted to Comparative Anatomy and Evolution was now supposed to be useless for students of Medicine who were discouraged from entering the Natural Science School in that way. To the amazement of lookers on, when historical and philosophical Oxford began to teach in earnest, as a separate department, the Anatomy of Man, a Lecturer was to be appointed in a subordinate and dependent place. A mean structure, a disgrace to the smallest provincial school, was erected for him in a yard. One would have expected that Oxford, that had built a half palatial general Museum, would have now prepared for the Human Anatomist a perfect establishment, which it could show with pride to Sir William Turner or Professor Virchow. Happily the blunder was speedily acknowledged, and has been partly rectified by Mr. Arthur Thomson. His patience and energy have saved us from permanent ridicule. The generosity and confidence of General Pitt Rivers have helped to bring back the higher conception of the material frame, the evolution, and the conditions of Races, to which Rolleston was raising it.

The University, which now has Max Müller and Sayce, and which once had Linacre and Harvey, may yet be able to show that the study of man's bodily frame for the practical purposes of Medicine and of Surgery, should be carried on in relation to, and as part of, a reverent and philosophical study of the evolution of the Race, both in its bodily and its psychical aspects.

The University may yet see that, considering the vast stream of Biological knowledge flowing on by a thousand rills from every quarter of the globe, it may be worth her while so to arrange her methods as to include and not to exclude her future Physicians from interest in the philosophical study of Natural Science for which in the last forty years she had done so much. She ought not either to forget what, in respect of Natural Science and of Medicine, she can do for, and what she can obtain from, the devoted Missionaries whom she is sending, blessing and blessed, to their difficult Indian and African lives.

I cannot conclude this portion of my letter without saying how much we all expect from Dr. Burdon Sanderson, if he can resist the pressure put upon him to restrict his wide purposes and deep scientific insight into the principles of life, within the supposed limits of study proper for a provincial Medical School. Personally, I am bound to add a hope that he may assist me in developing the wide study of Comparative Pathology, in the way I have indicated above. The laboratory of the Regius Professor of Medicine is open for any Government worker, or for any far-seeing person who will endow it for this new and important work.

And I must be allowed to add, having reference to what is said elsewhere with regard to Oxford as a possible model

of all beneficent arrangements for a population in respect to health and disease, that the time may still come, when the University shall have such relation to these arrangements, and such funds at its disposal as to attempt here what is done by German governments for German Universities, in the development of a complete practical School of Medicine, or as will be done at Baltimore by John Hopkins's Trustees. But to do this would require a great and unjustifiable waste of money (situated as we are between London and Birmingham), as well as united effort of the best minds conversant with the progress and *proportional* value of modern knowledge, with the present needs of Biological investigation, and with the more recent philosophy. Young Oxford has the men and the enthusiasm, but they are not united.

The present time is opportune for reconsidering the lines on which the University should introduce her students to the higher conception of Practical Medicine. Fifty years ago, the *Literae Humaniores* were inadequate representatives of knowledge. Now we see that the complicated condition of human society, with its pressing needs, demands such extended estimate of the Physician's functions as to include not only the treatment but the prevention of disease in individuals, in families, and in communities, and the difficult problems of Comparative National Health. Fifty years ago some older practical men would ridicule a young Physician who gave attention to the health condition of dwellings, or even to Hospital construction. In this country the thoughtful medical man working among the poor is now brought into contact with questions foreign to the actual practice of his art, such

as questions of out-of-door relief, medical relief, the employment of district nurses, and their relation to the distribution of medical comforts. All these are parts of the daily life of some medical men, and those who do not share them ought all the more to have acquired just views concerning them, so as to help on sound public opinion, and to create just professional sentiment. There is waste of effort in large towns¹. Witness the constant discussions concerning the out-patient system in hospitals, the different opinions as to provident dispensaries, as to how they should be managed, their relation to the hospital, the social position of their medical officers. The Hospitals and Dispensaries might with advantage work together. The Dispensary Officers know the homes of the sick, their families, their wants. The Hospital Out-patients' staff ordinarily have no such advantage. The Dispensary Officers should be able to draft cases into the Hospital. The Hospital Committee and staff might pass on many of their out-patients to the Dispensary. Both would thus work together with district nurses, the poor law, the ministers of religion, and district visitors.

Now I am aware that wise and kindly medical men often do all this. More desire to do it. But they do so each by working out their own plan of life, and not by concert, or by education. Things fifty years ago were wholly adverse to any such combined method. This subject is not to be settled in a few lines. The present point is this. By the formation of the County Councils every arrangement affecting the health of the people will gradually receive full consideration. Let us suppose that it comes about that in Oxford, a town of moderate size, the organisa-

¹ See chapter v. of 'Memoirs on Cholera at Oxford in 1854.'

tion for preventive and curative medicine among the masses is perfected. Might not our intelligent and appreciative students be easily made personally familiar with such organisation? They see it discussed in daily papers and magazines. They hear of it at social gatherings; why not so arrange that, without diverting them from their precise scientific studies, they should, during their student days, have studied it practically. It would deeply interest all who were worthy. With careful arrangement one afternoon a week during their undergraduate days would more than suffice to make them familiar with the medical needs and state of the sick poor.

I shall commend this matter to our County Council, and earnestly seek their opinion and advice. No object still remains to me of greater interest than to aid in making Oxford a model of united and thrifty organisation of the public health, linking all its health institutions in harmonious action, and showing them to our future young Physicians as a 'carte du pays' for their respective lines of study and work.

For the past twenty years I have taken a class round a rural district every year to show simple health conditions, the construction of single dwellings, the common causes of disease, as illustrating fundamental Hygienic laws, and as a groundwork for detailed study in their after life. The intelligent gratitude expressed by medical men, clergy, and laymen of various pursuits, for these elementary demonstrations has been helpful and encouraging. I still hope to adopt an analogous method introductory to the study of all departments of preventive and curative Medicine. Public opinion seems ripe for it.

Before my late illness I had arranged for some of these

demonstrations, aided by Sir Douglas Galton and Sir Robert Rawlinson, to both of whom I have owed much for many years; by the kindness of Dr. Thorne Thorne; by our Borough Engineer, Mr. White; our County and Borough Medical Officers of Health, Dr. Wood and Mr. Winkfield, and several others.

One result of such method of general and elementary instruction will be indirectly to help all good organisations in the city, whether for public or personal health. Forty years ago it was a great object to make the County Hospital the type and centre of Medical work in the widest sense¹. The attempt met with the sturdiest opposition, though in the end it was partially successful. The result is perhaps on the whole fortunate. For now we have a well-managed, though not typically constructed, General Hospital. There have grown up also an Eye Hospital, a Hospital for Infectious Diseases, a good Workhouse Infirmary (which was in my memory a scandal to any town), a good Asylum for the Insane, a Convalescent Home, a Hospital for Incurables, a highly popular Nurses' Home, with rooms for In-patients (who go there at their own cost for special surgical and medical treatment, open to every practitioner), a large Penitentiary, a Charity Organisation Society, admirable Drainage and Sewage works, a Sewage Farm, excellent Water-works instead of those which pumped sewage-water through the city, and a completely organised sanitary supervision of all Students' Lodgings in the town under a skilled Sanitary Engineer.

It is worth remembering that some of our institutions are good for study, because they are not perfectly contrived.

¹ See my Memoir on the Cholera at Oxford in 1854, chapter iv. page 126, 'On certain points affecting Voluntary Institutions for giving Medical aid.'

The arrangement of our Infirmary makes a better subject for lecture than St. Thomas' because it is full of mistakes, fought against and partly conquered; the reason of this can in every case be shown to be either the result originally of want of knowledge, or the result of opposition, narrow views, and false economy. Is not this just the history of much of Progress in this free country?

But we have passed this stage. There is now seldom any reason why the best plan should not be carried out, unless grave financial reasons forbid. The knowledge exists in common public opinion, and there are experts enough to advise at every point. There are however new dangers from fashion and from advertising. These did not exist in the days of Lord Shaftesbury, Chadwick, Miss Nightingale, Parkes, and Simon.

A general acquaintance with all the parts of a city well constructed and administered would be invaluable to Medical students and the public. Should some such course of initiation into practical knowledge of disease, its causes, conditions, and remedies, as has been proposed, be promoted or enjoined by the University, excellent results might follow. Daily occupied when in Oxford in rigorous observation or experiment in some department of Natural knowledge, the student would also be in constant intercourse through his whole career with one or other of the men whose lives are devoted to the blessed humane work of alleviating human suffering in its many forms. He would have his powers of observation directed not only to the restricted conditions of palatial wards in large Hospitals, where contrivances of the most perfect kind are arranged for the preservation of health, and the treatment of acute disease, with highly-skilled nurses at hand by day and by night. He would see

the ruder forms of management in the Workhouse, and death by natural decay among the infirm and aged. He would obtain a general insight in the Asylum into the various characters of mental aberration, its causes and its effects, and management, though in a limited class of the people. He would see in the several kinds of homes the striving and the difficulties of the sick and independent poor. Guided by the borough Officer of Health and the Sanitary Engineer he would have a general notion of both urban and rural conditions for health, and the causes of disease. Having been introduced to all of these various aspects of medical life by the Professor, who should be a man of the widest sympathies, he would afterwards apply himself to the rigorous details of the Clerk or the Dresser's duties in a great Hospital, prepared as few men have been prepared. He would be trained in the Museum at the same time by the rigid precision of the scientist, and guided to the intelligent study of the organisation needed, whether for the public health, or for the detailed management of the sick in every class and circumstance.

Having access to the Scientific and Medical Library in the Museum, he would become from the first interested in the literature of the manifold departments of his Profession, literature which now largely displaces oral lectures that are not demonstrative or experimental. In short, he would insensibly obtain, over the whole range of Medicine, the same kind of guidance that an apprentice in the old empirical days received in his restricted sphere—a guidance the loss of which is beginning to attract the attention of those engaged in Medical education. Among the practitioners, whether in the Hospital or elsewhere, the student would meet able and devoted men, able and willing,

without being distracted from their scientific work, to tell and shew him much, and teach him by their own characters or lives much of service in after life¹.

From friendly communications and much kindness that I have received, I do not doubt that all, or almost all, who could in this matter help the University would do so.

The lines which have now been written are the result, as you have seen, of duties and enquiries forced upon me from the year 1845 both here and elsewhere. You must remember that I was an active member of the Royal Sanitary Commission of 1870, and for twenty-nine years in intimate intercourse with the eminent representative members of the Medical Council. I cannot take a local or provincial view of the matter. I have often been asked to write an account of the circumstances under which the Museum was built, the care of public health in Oxford developed, including the abolition of the local acts, the steps gone through for obtaining our system of drainage, our water supply, the reconstruction of the County Hospital, and the disappearance of polypharmacy in the district. It would, no doubt, be a singular story. But it would be stirring mud when we are seeking the purer streams.

While many of the chief intellects of Oxford were mainly directed to an intense, though perhaps a limited theology, there was probably, through the usual reaction, a tendency with some of us to deify the knowledge of 'Nature,' and a conviction, the offspring of too limited reflection, that the study of the Material World necessarily led to a higher conception of spiritual life. This was not the case with our best and strongest men. Of these, perhaps, the finest nature was the Savilian Professor of

¹ See Appendix, Note vii.

Astronomy, William Donkin. Generations pass here quickly. Few now remember him, or the veneration with which that acute and tender nature was regarded by his friends. He led a life of comparative seclusion, slowly fading away during many years from pulmonary consumption. But a few weeks before his death he suddenly said to me, in his gentle way, 'Were it not for Christianity I should not have cared to live.' Yet there never lived a man who had higher intellectual pleasures, the offspring of studies in Mathematics, in Physics, Astronomy, Music, Literature. He was a fine performer on the organ, and a refined violinist and pianist. A touching sacred composition by him is performed by our College Choirs.

Still some of us, perhaps, overvalued the total effect on human nature of material investigation and natural knowledge. Experience shows they cannot do everything. Reaction is beginning. I trust it will not go too far. We are taking, moreover, a utilitarian path. In our zeal for technical and practical progress, under the pressure of insular over-population, we are praising our Science chiefly for its material advantages, not for its truth and its discipline.

In Professor Sedgwick's *Studies of the University of Cambridge*¹, written many years ago, is a passage which you may remember in that remarkable and characteristic volume. It refers, no doubt, to another condition of things, as well as place, but its noble spirit, characteristic of the veteran geologist, belongs to all conditions and all time.

'Once for all—the prospects of the University, so far as regards the future, are obscured by the clouds which now seem to be hang-

¹ Discourse on the Studies of the University of Cambridge, by Adam Sedgwick, M.A., F.R.S. Fifth Edition, p. cccxxxvii.

ing about the country ; but if we have some cause for fear, we have good cause (if we be true to ourselves) for thankfulness and hope, and our only security is in the righteous performance of the great trust that Providence has committed to us. Cambridge is not a mere school of material science ; for material science teaches us not our religious and social duties, and may lead us into a proud indifference to the moral interests of our fellowmen, into scepticism, or into material pantheism, which is the basest form of infidelity. Cambridge is not a mere school of experimental or mechanical discoveries ; for mechanical inventions have sometimes, through the cold-heartedness and selfishness of men, become the powerful instruments of moral evil. Cambridge is not a mere school of the imagination, and of the refinements and luxuries, and decorations of human learning ; for these things, however good and beautiful and useful as the accessories of more solid learning, may become the most dangerous ministers of a moral poison. She is not a mere dogmatic teacher of the national religion ; for religion without moral, social, and physical knowledge, will lead us, almost of necessity, into one-sided and narrow views of religious truth, false estimates of ourselves, bigotry, and intolerance, and into disloyalty to the State, should the State possess the true elements of religious freedom ; and, worst of all, such a religion will sometimes lead men to sacrifice the sacred principles of candour, charity, and truth, to the supposed interests of a party. These are no ideal evils ; they are still rampant in society, and past history tells us that crimes, which have been the shame and dishonour of humanity, have again and again been perpetrated in the sacred name of the religion of Jesus.

‘But the teaching of the University of Cambridge has not been that of a bigoted and narrow school, and we earnestly hope that she will shew in times to come that exalted Catholicity *which gives to faith what belongs to faith, while it gives to reason what belongs to reason*—which honours truth under whatsoever form, moral or material—which tells us that our apprehension of truth is an apprehension of a part of the attributes and will of God, and that all truths are knit together in inseparable unity, and have their

everlasting seat within His bosom. If this continue to be her faith, she will think it her greatest privilege to be the honoured channel of conveying the widest lessons of truth to the children of the State; and this she will do zealously, and not grudgingly; and little will she have to fear from new fashions of study or revolutions of opinion, for her interests will be blended with the best interests of learning and humanity, and charity and religion; and the State will honour her as the blessed instrument, under Providence, of conveying to its sons their first and best lessons of wisdom and science, of faith, moral purity, and brotherly love.'

Some of my Oxford friends may wonder at my thus referring to the sister University. But on the other hand, there are some who seem to live in a terror of their powerful sister, and pose too openly as her mere copyists. In respect of Medicine some are in error as to the facts. The best men in Cambridge desire all her sons to study the practical parts of the Profession in the great London Schools just as all do here who understand the case; but some use misleading language. Cambridge has had the advantage of a great scientific Surgical Teacher who possessed or made opportunities which we have not. Some of our charioteers, having given no help during the old Museum conflicts, at the eleventh hour seize the reins, and may place us at great disadvantage in a way they do not see.

But I conclude, deeply grateful for constant help at home and from abroad in my limited range of work and thought. I commend these which may be among my parting words, to you and to younger men. From these last indeed I receive support and kindness which encourage me still to strive to aid them in meeting the new wants and fresh problems of their complex lives. Few survive who have watched and shared our endeavours as you have for many years. The advances in Medicine, Surgery and

Pathology during the period we remember have had no parallel in History. Yet we seem to be only on the threshold of complete biological knowledge.

I reserve for another occasion what, as appears to me, the University can specially do in the Department of Public Health. The whole body of the University, and especially the younger men, have within the last few years shown so wide a conception of her national functions and duties in many Departments, that I may be emboldened to speak hereafter as plainly of our relation to the Public Health as to that of Practical Medicine.

I am,

Your affectionate friend,

HENRY W. ACLAND.

APPENDIX.

NOTE I.

Memorandum as to the Medical Department of the University of Oxford and the Radcliffe Infirmary.

DURING my continued illness last year, 1888, it was privately communicated to me that a very eminent Physician (I may not specify further) was willing to take the Office of Regius Professor of Medicine in Oxford, if vacant. He was a person of the highest character, and of ample means. He wished to reside in Oxford on account of the scientific and other advantages of the University, to which, being in full vigour, he would largely contribute.

It became my duty to carefully consider whether at once to resign my office in order to secure so great an advantage to Oxford. Acting under advice, I deferred for a time the decision.

For private reasons this gentleman would not now accept the Professorship.

But I was led in this way to reflect what would be the relation of such a person to our Local Hospital. I observed that unless there were a vacancy there (and the staff are all young) he would not be attached to the Institution as Physician nor give to it the benefit of his knowledge and experience.

It would have been clearly disloyal in me if I did not draw the attention of the Infirmary and of the University to these circumstances. The simplest way was respectfully to represent the case to the Governors in their Quarterly Court for their consideration. As their Physician for more than thirty years, their Consulting

Physician now, and a Governor for forty years, I could not do otherwise. I gave therefore the following notice in the usual way :—

MOTION PROPOSED BY SIR HENRY ACLAND.

That it is desirable—

1. That the Regius Professor of Medicine in the University of Oxford be *ex officio* a Member of the Board of Management.
2. That the Regius Professor of Medicine have under his charge ¹ Medical beds for Males, and ¹ Medical beds for Females, and ¹ Children's beds, if he so desire.
3. That these Regulations be not put in force (either or both) during the tenure of office of the existing Professor, unless by vote thereon by the Board of Management.
4. That, if the above be carried, it be referred to the Committee of Management to consider what alterations in the Rules will be required, and to report thereon.

(Signed) HENRY W. ACLAND.

19 March, 1889.

On the 30th May this resolution was forwarded to me by the Chairman :—

‘Resolved, that inasmuch as a rule based on the resolutions of which Sir Henry Acland has given notice for the next Quarterly Court would be repugnant to the general design and spirit of the Charter of Incorporation, such notice of motion shall not be placed on the Agenda of the next Quarterly Meeting.’

I acknowledged the receipt of the Resolution on the 31st as follows :—

‘DEAR MASTER OF UNIVERSITY,

‘I am much obliged to you for transmitting, as Chairman of the Committee of Management of the Radcliffe Infirmary, a copy

¹ Number to be agreed upon hereafter, if the motion be carried.

of a Resolution of the Committee relating to the Regius Professor of Medicine.

‘I think it my duty, as a Governor of the Infirmary, to observe that the notice of motion given by me, was to enable the body of the Governors *to consider*, whether the proposed arrangement was, or was not, in itself *desirable*, and not whether under present conditions it was *possible*.

‘I note that, in the judgment of the Committee, it is not desirable that the whole body of the Governors should be permitted even to *consider* the existing relations between the Hospital and the University in respect of the Faculty of Medicine. In a time of transition and progress in science and medical practice, this is surprising.

‘I feel bound to assure the Committee that one who served the Infirmary as Physician to the best of his ability for more than thirty years, and has been connected with it for more than forty, desired only to lay the circumstances before the Governors at large, prior to his decease, or to resignation of the office he holds, at least as much in the interests of the Governors, the sick poor of this district, and the staff of the Hospital, as of the University. If the enquiry were to take place with advantage, it could only be made before a vacancy, and when the enquiry could affect no personal interest. The present relation of the Infirmary to the University in this particular is now made clear.

I have the honour to be,

Dear Master of University,

Very faithfully yours,

HENRY W. ACLAND.

‘*The Treasurer of the Radcliffe Infirmary.*’

NOTE II.

Letter to Dr. now Sir Joseph Hooker.

OXFORD,
November 3, 1875.

DEAR DR. HOOKER,

The return of the October Term will probably bring before the University your opinion, (which I have not heard officially, but which meets me in society at every turn,) that *it is not desirable to perfect the long-intended design of placing our Botanical Collections and Gardens in proximity to the other Scientific Collections of the University.*

As this opinion seems to me to have been possibly given on an incomplete account of the reasons for the change, I venture to ask you to peruse the following statement, hoping that it may induce you to re-consider your conclusion, if it really be such as I hear.

Thirty years ago it appeared to some still living (for the greater number are gone) that the means for Scientific study and research in Oxford required complete reconstruction. The Geological, Anatomical, Zoological, Physical, and Chemical Collections and Apparatus were ill-placed in detached buildings. The Botanical Garden and the Scientific Library also were in separate parts of the town.

We decided to attempt the serious, because then unpopular, task of moving to a common Institution all that could be moved, and providing Laboratories and Lecture-rooms suitable for each department. All has gone well thus far. The University has purchased eighty acres of ground, on the fringe of which the Scientific Institute has been erected; there is room therefore, and to spare. The Cabinet of Physics moved thither is developed into Professor Clifton's excellent Laboratories. The Chemical Department, planned by Sir Benjamin Brodie, has been constructed without stint, though already it needs extension to meet Professor Odling's wants. Buckland's Geology, arranged by Phillips in the

court of the Museum, is, under the care of Prestwich, gaining new significance. The fossil Fauna can be readily compared with the extensive Anatomical Collections which, moved from Christ Church by the far-reaching liberality of the Dean and Governing Body, are becoming, under Rolleston's energetic treatment, of great value for reference in every department of Animal Biology. The Mineralogy has been re-arranged near the Mineralogical Laboratory by Professor Maskelyne, and a Lithological Laboratory is contemplated. All Hope's and Westwood's Invertebrates are moved from the Taylor Buildings. The Radcliffe Trustees, following the advice of Sidney Herbert and Mr. Gladstone, have transferred, for the common advantage, their large Scientific Library, and more than doubled their annual grant for Books. Even an Observatory has been instituted there under the direction of Mr. Pritchard, with the aid of Mr. De la Rue, as it were to crown the whole. One great Department only is missing. Though the fossil Flora is there, the modern Botany, its studies and its Teachers, remain aloof. I grieve to say, this separation, most injurious as it seems to me to the future interests of Biological Science in Oxford, is now said to be approved by you, and supported by your high authority.

There may seem little chance that I shall prevail against you in a contest on such a point. The matter will be decided by an open vote in our Convocation. Numbers, perhaps, are bound to side with you. But as this is a question on which my hopes in this direction during thirty years of labour in the University may be dashed at the eleventh hour, I will briefly state some of the reasons which guide my opinion.

1st, I believe that narrow and false views of Nature are promoted, by needlessly separating the study of its several departments, instead of aiming to apprehend its Unity.

It is true that sub-divisions become necessary, as well from the mere magnitude of Science, as from the mental conditions under which research must be carried on. It is therefore all the more desirable that there should be unity in the study of Science, and constant intercourse among her Students, where union and intercourse are possible. The Biological portion especially requires

this. The links which bind Scientific Botany with the other portions of Biology, with Geology, with Physics, with Chemistry, with Experimental Agriculture, become more important every year. If proof were needed, Darwin's last book on Insectivorous Plants would give sufficient evidence. Many problems concerning the conditions necessary for digestion in animals will have to be re-considered in the presence of new facts. If I am not mistaken, the minute discrimination of true Species of plants will be more and more required in connection with the difficult Geological questions as to the position of Strata. And, in short, if ever there was a time when Botanical Studies should not be kept aloof from the general body of allied Science, its Library, its Laboratories, it is the present time.

But, 2ndly, I am told that you have given to the Council of the University reasons against moving our Botanical Gardens to near the Museum which may be classed as two, 1st, that the University never can need more than three or four acres of ground for Botany; and, 2ndly, that it is undesirable from *Æsthetic* and Historical considerations to move the Gardens.

Now, I have never heard it complained that Kew Gardens are too large; or that the University of Edinburgh laments the possession of its splendid botanical grounds. The University has now, round her Scientific Institute, eighty acres of open ground, on which already a large assortment of shrubs is planted, and over which assuredly the Professor of Botany should exercise scientific control; and in which he might make in the course of time experiments of extreme importance both to Science and Agriculture, with the Professors of Physics, Chemistry, and Biology close to him. All this, moreover, would conduce greatly to the instruction and pleasure of the now numerous residents in the increasing suburban dwellings round Oxford.

Again, the *Æsthetic* and Historical reasons alleged against removal seem to me equally questionable. If the Botanical portion be moved, the gateway, the old walls, the trees, the Cherwell, all will remain. The Glass Houses only and the formal plots would be gone. The site, its associations, its history, would be unharmed. Moreover, the present Gardens do not belong to

the University: they are the freehold of Magdalen. If the University develope its Botanical department elsewhere, this spot would be still Magdalen College Garden, and would still remain a beautiful spectacle for all Oxford.

I had almost forgotten to remind you of what you doubtless have heard on better authority than mine, that the *Houses are unsatisfactory on several accounts: and that the Building in which the Dried Collections and other Botanical specimens is contained is too small, is ill adapted for its purpose, and can hardly be added to as it now stands.* Rebuild these far away from the Museum and the Parks, and you have needlessly separated Botany in Oxford from the other sciences, and the Botanical Professor and his Students from their colleagues, and from all their appliances, for generations to come. Rebuild them, with a new House and Work Rooms for the Professor, in the Parks, and you finish the work we have been engaged on for thirty years, and have in the future a noble prospect for the development of a complete national Education in Science, long after most of us, though not you, are forgotten.

I should have been disposed to appeal to your generosity, as an old friend, not to give your verdict, except from the strongest scientific reasons, against the promoters of scientific progress here. But I cannot learn that you have based your opinion on the scientific merits, and I prefer to rest my appeal on much firmer ground than personal kindness. The formation of the Royal Society was promoted in Oxford more than two centuries ago, to advance simultaneously every Branch of Human Knowledge. Fortune planted it in London; and you have become its illustrious President. In these two centuries Oxford fell behind London in all Physical research, to the great injury of the highest National Education. A few years since a determined band of your own Fellows resolved to enable the University to regain its ancient opportunities for scientific work. I have laboured in one humble field, that of making machinery for the next generation. If you can re-consider your opinion, and advise the University, on reviewing the whole case, to perfect our arrangements for the future complete study of Nature in its Unity, depend on it future genera-

tions of Students will bless you : and those who have striven all their lives for this end,—an end, observe, whose fruit will mainly be for others when they are gone,—may yet witness the success of their labours in thankfulness and peace.

I have only to beg you to excuse the earnestness of my appeal, and to forgive me if I am obliged to rely on hearsay information and not on an official knowledge of your opinion. But hearsay information may decide the votes.

I am, dear Dr. Hooker,

Faithfully yours,

HENRY W. ACLAND.

To J. D. Hooker, Esq., M.D., D.C.L.

Director of the Royal Gardens, Kew, and President of the Royal Society.

On May 17, 1876, the following additional statements were circulated in Convocation.

‘The University had entered upon a plan whereby its Department for Scientific Study and for Research would have become, if not unequalled, certainly unsurpassed, for convenience, completeness, and space for extension. Old institutions have been broken up and removed for the sake of this convenience, completeness, and space. It is now proposed to abandon the hitherto successful design ; one which, including the purchase of the Parks, where it has been carried out, has cost not less than £125,000, exclusive of the value of the collections, the annual expenditure upon them, and the salaries of the officers of all grades, making a total of over £200,000 in twenty years.

‘The expenditure of £9,000 in another part of the town will make this design incomplete for the lifetime probably of all here now, and perhaps for ever.

* * * * *

‘I would therefore respectfully urge the University to pause until all the requirements of the Scientific Departments are before it ; and not, at this critical moment of University administration, precipitately to take an irrevocable step in a new direction.

* * * * *

‘There is no course left for me but respectfully to submit this brief statement to the consideration of the University.

‘It is made with a full conviction of what is in the true interest of the future of the University; and in the belief that Sir W. Hooker and Dr. Daubeny were right, and Dr. Hooker and Professor Lawson, as long as they followed them, right also; that although Magdalen may seem now to act wisely as a corporation, in allowing the University to develop a large scientific institution at its gates, and on its property, yet that posterity will wonder why the University, at this epoch of its history having a unique opportunity of founding a complete institution on its own noble site, and having all but succeeded, suddenly reversed its policy, and split up for ever the unity of its arrangements for the Study of Nature.’

NOTE III.

*William P. Ormerod and Charles J. Pode.
In Memoriam.*

The premature death of Dr. Pode and Mr. Ormerod, who have been named in the letter to Dr. Andrew, stopped much good work in Oxford, and left a blank in our ranks never repaired. Ormerod, pupil of Arnold of Rugby, and nephew of Latham was a scientific student and practical surgeon of the first order, and a man whom to know was to respect and to love. Dr. Pode was a highly cultivated physician who, from feeble health, did not intend to practise. He hoped to devote his life to the more delicate investigations relating to minute Pathology, which since his death have produced so great results. He spent some years in the Medical Laboratory of the Museum, preparing for this scientific work. With Mr., now Professor, Lankester he drew up an important paper on Bacteria, published in the Proceedings of the Royal Society, vol. xxv. p. 349. The experiments on which they were engaged had reference partly to previous observations by Dr. Child, Dr. Burdon Sanderson, and others.

NOTE IV.

Relation of Physiology to Pathology.

Synopsis of the Pathological Series in the Oxford Museum, 1867, pp. 13, 14, 15.

‘It appeared essential twenty years ago to extend the means of biological study in this University, both for the purpose of general national education, and for the fundamental scientific training of students for the medical profession. One of the first systematic steps was to lay the foundation of an extensive physiological series, which should contain the germs of every part of biological study.

‘Of a part of this attempt a brief account was published in 1853¹. That account generally set forth the elementary principles of physiological study, as a key to the study of the healthy organism. It was not desirable at that time to take notice of the pathological portion of the collection, which, according to the opportunities that offered, was slowly forming.

‘But it was then pointed out² that the physiological student “must endeavour to understand what changes take place in the living beings themselves; by what means they are formed; what changes they undergo during this process of formation; by what means they are nourished when fully formed in their several parts and in their whole; through what combinations and by what means the matter which has performed its work in the living being is eliminated from it; and also to what extent these changes are necessary in individual parts of the organism for the maintenance of the whole; what forces—external to the organism or internal, whether physical or vital—are engaged in maintaining this continuance of life; how far injuries and losses of parts are capable

¹ Synopsis of the Physiological Series in the Christ Church Museum, arranged for the use of Students after the plan of the Hunterian Collection, and chiefly under the divisions of the Hunterian Catalogue (Oxford, 1853). (This volume is quite out of print, but may be seen in the Radcliffe Library.)

² Physiological Synopsis, p. viii.

of repair, and by what circumstances, and through what steps, the cessation of these living phænomena, or death, ensues."

* * * * *

'What is desirable for the philosophical student of Biology as a branch of general culture, is a necessity for the student of the healing art, as one of the corner-stones of his profession. He, however, must do this work in combination with the study of symptoms during life, for the reasons alleged above¹.

'These then are the two classes for whose instruction this series is prepared. For the purpose of general culture the study is desirable as a complement to the history of growth and formation: for the purpose of the future physician or surgeon, it is necessary as an aid indispensable for the comprehension of curative processes, and of modes of death.'

NOTE V.

Importance of Comparative Pathology.

Extract from a report of observations made by me, as President of the Section of Public Health, at the Meeting of the British Medical Association in CAMBRIDGE, 1880. See *British Medical Journal*, 1880, Vol. II, p. 473.

'It was of great importance that it should be clearly understood by the public, as it was by scientific men, that the study of the pathology of domestic animals could not be wholly or properly separated from that of man, and *vice versa*. Anyone who heard, or who would read Mr. Vacher's and Mr. Fleming's remarks on this subject, as well as those contained in various of Mr. Simon's Reports, in the American National Health Reports, and in numerous original works, would be entirely convinced of this. It was for this reason that he (Dr. Acland) had long urged the formation of a well-endowed chair in Oxford of General and Comparative Pathology,

¹ Pages 10, 11.

one that should systematically treat of all that was established, and new, in regard to animal diseases; and should carry on researches therein. Oxford, being in the centre of an agricultural district, would be in some respects a very suitable locality. He dared say that some members of the Section had been present at the address which had been delivered that morning by Dr. Michael Foster, on the inseparable relations of physiology to general pathology. Dr. Foster did not get over the whole ground, for, in addition to those points which had been alluded to, there was the general question of comparative pathology. He would now venture to say that nothing more remarkable than the discussion which had taken place that day had occurred in any of the Sections, because the scientific subjects which had been discussed affected the whole human race. In the paper by Dr. Foster, they heard that physiology and pathology were one, and his remarks confirmed what he (the President) had repeatedly pointed out for many years past, that the anatomical and physiological teaching at Oxford would be incomplete without the elements of general pathological science, in the sense just now explained; and for this plain reason, that the tendencies to decay and death were just as much an integral part of the living economy as were development, growth, and maturity. The Chairs of Physiology, Comparative National Health, and General Comparative Pathology, with proper laboratories and appliances, were all needed in the present day for the biological series, and even then were inadequate to the vastness of subjects involved. Pathology was merely a disturbance of the healthy functions, and the proposition concerning disease amongst human beings applied to animals. He would not presume to discuss the questions which had been raised as to the possible spread of tuberculosis. About this, they were only in their infancy; they were just learning to talk about it, and to mark, and to observe, by means of the wonderful progress in the field of research; and in this connection, he would say that they had many opportunities, through their medical officers of health, of founding a great sanitary science for the human species. He cordially endorsed the remarks of Mr. Fleming as to the importance of Government understanding this subject.'

NOTE VI.

*Letter concerning M. Pasteur to the Right Honourable
the Lord Mayor of London.*

OXFORD,

June 28, 1889.

MY LORD,

I have to thank your Lordship very sincerely, for inviting me to the Pasteur meeting at the Mansion House on Monday next. I much regret my inability to attend, and therefore I venture to write these few lines to your Lordship.

Of the value and importance of M. Pasteur's labours and discoveries there can be no question in the minds of reasonable persons. Of M. Pasteur's self-denying and splendid career the civilised world is thoroughly convinced. I desire therefore to render my humble testimony to both these, with my fellow-countrymen, under your Lordship's direction and guidance.

But I should not wish to express this sentiment in such a way, as even to appear to imply that England herself cannot, if desirable, take part in this matter. I am still of opinion, as I have repeatedly stated in public and private for the last twenty years, that this University should possess an Institute of General and Comparative Pathology, in which any circumstance whatever attending the causation, prevention, and treatment of diseases affecting the Animal Kingdom could be carefully studied as a branch of Biology.

I further believe that such an Institute or Laboratory should be subsidized from national funds, because its work would be of national utility; and, being situated in the centre of an agricultural district, it would have obvious advantages for carrying on the necessary enquiries; while its position in the University would furnish a positive guarantee that nothing extravagant or uncalled for would be attempted. Moreover it is essential for the development of the higher Medical Education, and a necessary supplement to the Laboratories for Physical Science already existing here.

I still hope and believe that such an Institute must soon be

established ; then work similar or analogous to that of M. Pasteur would be one of the matters that could be undertaken by it, if desirable.

I cannot therefore now give assent to any proposition which even seems to imply that such duties cannot and should not be carried out in England.

To M. Pasteur, on every ground I wish to tender my homage and respect.

I have the honour to be,
My Lord,
Your Lordship's faithful Servant,
HENRY W. ACLAND.

The Right Hon. the Lord Mayor.

NOTE VII.

On the character of the Student of Medicine.

I should regret if any thing that has been written in my letter to Dr. Andrew should give a colour to the idea that I overrate the value of the purely scientific study of Physiology to the practical Physician and Surgeon.

In a transitional period it is often difficult to fairly estimate the relation of the past to the present, and of either to the future. But while it is certain that scientific Biology (as even the question raised by Galton and Weisman show) in its widest sense is the basis of scientific Pathology, of the prevention and treatment of disease, it is as certain that the practical character of the medical man, his moral and social standpoint, remain now as they were illustrated by the noble temper of Hippocrates, twenty-three centuries ago. I therefore reprint for the lay reader a passage from one of the best Clinical teachers of this century, an Oxford man, Dr. LATHAM.

Extract from Clinical Lecture by Dr. P. M. Latham, vol. ii. pp. 23, 24.

‘Diseases are not abstractions; they are modes of acting, different from the natural and healthy modes—modes of disorganizing, modes of suffering, and modes of dying; and there must be a living, moving, sentient body for all this.

‘This body must be your study, and your continual care—your active, willing, earnest care. Nothing must make you shrink from it. In its weakness and infirmities, in the dishonours of its corruption, you must still value it—still stay by it—to mark its hunger and thirst, its sleeping and waking, its heat and its cold; to hear its complaints, to register its groans.

‘And is it possible to feel an interest in all this? Ay, indeed it is; a greater, far greater, interest than ever painter or sculptor took in the form and beauties of its health.

‘Whence comes this interest? At first, perhaps, it seldom comes naturally: a mere sense of duty must engender it; and still, for awhile, a mere sense of duty must keep it alive. Presently, the quick, curious, restless spirit of science enlivens it; and then it becomes an excitement, and then a pleasure, and then the deliberate choice of the mind.

‘When the interest of attending the sick has reached this point, there arises from it, or has already arisen, a ready discernment of diseases, and a skill in the use of remedies. And the skill may exalt the interest, and the interest may improve the skill, until, in process of time, experience forms the consummate practitioner.

‘But does the interest of attending the sick necessarily stop here? The question may seem strange. If it has led to the readiest discernment and the highest skill, and formed the consummate practitioner, why need it go further?

‘But what if humanity shall warm it? Then this interest, this excitement, this intellectual pleasure, is exalted into a principle, and invested with a moral motive, and passes into the heart. What if it be carried still further? What if religion should animate it? Why, then happy indeed is that man whose mind, whose moral nature, and whose spiritual being, are all harmoniously engaged in the daily business of his life; with whom

the same act has become his own happiness, a dispensation of mercy to his fellow-creatures, and a worship of God.

‘Such a man any of you may be; but you must begin by learning to stand by the sick bed, and make it your delight.’

NOTE VIII.

All decoration to the Museum was obtained by gift. 128 Pillars, examples of British Geology, and 192 Capitals, illustrating natural orders of plants, were required. All the Pillars have been given and many capitals. Many remain uncarved.

It was intended to erect Statues first to the Ancient Investigators of Mathematical, Mechanical and Astronomical truths, viz.

EUCLID, ARCHIMEDES, HIPPARCHUS.

And, as representing the Ancient investigators of organised nature,

ARISTOTLE, HIPPOCRATES, PLINY.

Of moderns, first of all,

BACON, GALILEO, NEWTON, LEIBNITZ, OERSTED.

And in the second series.

LAVOISIER, LINNAEUS, CUVIER, HARVEY, HUNTER, SYDENHAM.

FARADAY, HERSCHEL, DARWIN.

Fifteen Statues have actually been erected, viz.

Presented by

BACON	}	. . .	Her Majesty the Queen.
GALILEO			
NEWTON			
LEIBNITZ			
HUNTER			
ARISTOTLE	. . .	200	Bachelors and Undergraduates.
HIPPOCRATES	. . .	Mr. Ruskin's	Father.
DAVY	The Marquis of Lothian,	M.A.

Presented by

PRIESTLEY	
LINNAEUS	The Rev. F. W. Hope, D.C.L.
HARVEY	
STEVENSON	
WATT	M. P. W. Boulton, Esq.
EUCLID	
OERSTED	Herr Jacobsen of Copenhagen.

NOTE IX.

It may interest some younger Medical readers to note progress in Medical Education by the following circumstances.

When I was a Clinical clerk in a famous Medical School, my first master openly ridiculed us for the study of the Stethoscope and the Microscope as unpractical toys, and considered working in Comparative Anatomy and Practical Chemistry a waste of time. In the period to which this pamphlet refers the Ophthalmoscope, Laryngoscope and Sphygmograph have been invented; Antiseptic Surgery, and the employment of Chloroform, and of Hypodermic treatment have come into existence; Bacteriology has been made a matter of serious study with all its results. Preventive Medicine has reached a reality, and skilled Nursing a profession. But we are still eliminating error from Therapeutics, and learning more clearly the truth and wisdom of the first Aphorism of Hippocrates. We are every day feeling more deeply the marvels of the unity, origin, and change of all matter, of which we know in the infinite Universe wherein we pass our personal life.

